SEQUENCE LISTING

<110> Korneluk, Robert G.
MacKenzie, Alexander E.
Baird, Stephen

<120> Mammalian IAP Gene Family, Primers, Probes, and Detection Methods

<130> 07891/003005

<140> US 09/654,743
<141> 2000-09-01

<150> US 08/576,956
<151> 1995-12-22

<150> US 08/511,485
<151> 1995-08-04

<160> 92

<170> FastSEQ for Windows Version 4.0

<210> 1
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<212> PRT
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<220>
<223> based on Homo sapiens, Mus musculus, Cydia pomonella, Orgyia pseudotsugata, and Drosophila melanogaster.

<221> VARIANT
<222> 8
<223> Xaa= Glu or Asp

<221> VARIANT
<222> 14, 22
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<221> VARIANT
<222> 2-7, 9-11, 17-21, 23, 25, 30-32, 34, 35, 38-42, 45
<223> Xaa=any amino acid

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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Pro Cys Gly His Xaa Xaa Xaa
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35 40 45

<210> 2
<211> 68

<212> PRT
<213> Artificial Sequence

<220>
<223> based on Homo sapiens, Mus musculus, Cydia pomonella, Orgyia pseudotsugata, and Drosophila melanogaster.

<221> VARIANT
<222> 13, 16, 17
<223> Xaa= any amino acid or is absent.

<221> VARIANT
<222> 1-12,14-15,18-68
<223> Xaa=any amino acid

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Xaa Xaa Xaa Xaa Xaa Leu Ala Xaa Ala Gly Phe Tyr Tyr Xaa Gly Xaa
20 25 30
Xaa Asp Xaa Val Xaa Cys Phe Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Trp
35 40 45
Xaa Xaa Xaa Asp Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Pro Xaa
50 55 60
Cys Xaa Phe Val
65

<210> 3
<211> 2540
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(2540)
<223> n=a, t, c, or g.

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ttaaaaactt ttgctaattt tccaagtggt agtcctgttt cagcatcaac actggcacga 180
gcagggtttc tttatactgg tgaaggagat accgtgcggt gctttagttg tcatgcagct 240
gtagatagat ggcaatatgg agactcagca gttggaagac acaggaaagt atccccaaat 300
tgcagattta tcaacggctt ttatcttgaa aatagtgcca cgcagtctac aaattctggt 360
atccagaatg gtcagtacaa agttgaaaac tatctgggaa gcagagatca ttttgcctta 420
gacaggccat ctgagacaca tgcagactat cttttgagaa ctgggcaggt tgtagatata 480
tcagacacca tatacccgag gaaccctgcc atgtattgtg aagaagctag attaaagtcc 540
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tactacacag gtattggtga ccaagtgcag tgcttttgtt gtggtggaaa actgaaaaat 660
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gttttgggcc ggaatcttaa tattcgaagt gaatctgatg ctgtgagttc tgataggaat 780
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tttacttttg ggacatggat atactcagtt aacaaggagc agcttgcaag agctggattt 900
tatgctttag gtgaaggtga taaagtaaag tgctttcact gtggaggagg gctaactgat 960
tggaagccca gtgaagaccc ttgggaacaa catgctaaat ggtatccagg gtgcaaatat 1020
ctgttagaac agaagggaca agaatatata aacaatattc atttaactca ttcacttgag 1080
gagtgtctgg taagaactac tgagaaaaca ccatcactaa ctagaagaat tgatgatacc 1140

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aaagcgtatt taatgataga atactatcga gccaacatgt actgacatgg aaagatgtca 2160
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<210> 4
<211> 497
<212> PRT
<213> Homo sapiens

<400> 4

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Phe Ala Asn Phe Pro Ser Gly Ser Pro Val Ser Ala Ser Thr Leu Ala
        35                  40                  45
Arg Ala Gly Phe Leu Tyr Thr Gly Glu Gly Asp Thr Val Arg Cys Phe
    50                  55                  60
Ser Cys His Ala Ala Val Asp Arg Trp Gln Tyr Gly Asp Ser Ala Val
65                  70                  75                  80
Gly Arg His Arg Lys Val Ser Pro Asn Cys Arg Phe Ile Asn Gly Phe
                85                  90                  95
Tyr Leu Glu Asn Ser Ala Thr Gln Ser Thr Asn Ser Gly Ile Gln Asn
            100                 105                 110
Gly Gln Tyr Lys Val Glu Asn Tyr Leu Gly Ser Arg Asp His Phe Ala
        115                 120                 125
Leu Asp Arg Pro Ser Glu Thr His Ala Asp Tyr Leu Leu Arg Thr Gly
    130                 135                 140
Gln Val Val Asp Ile Ser Asp Thr Ile Tyr Pro Arg Asn Pro Ala Met
145                 150                 155                 160
Tyr Cys Glu Glu Ala Arg Leu Lys Ser Phe Gln Asn Trp Pro Asp Tyr
                165                 170                 175
Ala His Leu Thr Pro Arg Glu Leu Ala Ser Ala Gly Leu Tyr Tyr Thr
            180                 185                 190
Gly Ile Gly Asp Gln Val Gln Cys Phe Cys Cys Gly Gly Lys Leu Lys
        195                 200                 205
Asn Trp Glu Pro Cys Asp Arg Ala Trp Ser Glu His Arg Arg His Phe
    210                 215                 220
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Pro Asn Cys Phe Phe Val Leu Gly Arg Asn Leu Asn Ile Arg Ser Glu
225                 230                 235                 240
Ser Asp Ala Val Ser Ser Asp Arg Asn Phe Pro Asn Ser Thr Asn Leu
                245                 250                 255
Pro Arg Asn Pro Ser Met Ala Asp Tyr Glu Ala Arg Ile Phe Thr Phe
            260                 265                 270
Gly Thr Trp Ile Tyr Ser Val Asn Lys Glu Gln Leu Ala Arg Ala Gly
        275                 280                 285
Phe Tyr Ala Leu Gly Glu Gly Asp Lys Val Lys Cys Phe His Cys Gly
    290                 295                 300
Gly Gly Leu Thr Asp Trp Lys Pro Ser Glu Asp Pro Trp Glu Gln His
305                 310                 315                 320
Ala Lys Trp Tyr Pro Gly Cys Lys Tyr Leu Leu Glu Gln Lys Gly Gln
                325                 330                 335
Glu Tyr Ile Asn Asn Ile His Leu Thr His Ser Leu Glu Glu Cys Leu
            340                 345                 350
Val Arg Thr Thr Glu Lys Thr Pro Ser Leu Thr Arg Arg Ile Asp Asp
        355                 360                 365
Thr Ile Phe Gln Asn Pro Met Val Gln Glu Ala Ile Arg Met Gly Phe
    370                 375                 380
Ser Phe Lys Asp Ile Lys Lys Ile Met Glu Glu Lys Ile Gln Ile Ser
385                 390                 395                 400
Gly Ser Asn Tyr Lys Ser Leu Glu Val Leu Val Ala Asp Leu Val Asn
                405                 410                 415
Ala Gln Lys Asp Ser Met Gln Asp Glu Ser Ser Gln Thr Ser Leu Gln
            420                 425                 430
Lys Glu Ile Ser Thr Glu Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys
        435                 440                 445
Leu Cys Lys Ile Cys Met Asp Arg Asn Ile Ala Ile Val Phe Val Pro
    450                 455                 460
Cys Gly His Leu Val Thr Cys Lys Gln Cys Ala Glu Ala Val Asp Lys
465                 470                 475                 480
Cys Pro Met Cys Tyr Thr Val Ile Thr Phe Lys Gln Lys Ile Phe Met
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Ser
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<210> 5
<211> 2676
<212> DNA
<213> Homo sapiens

<220>
<221> variation
<222> (1)...(2676)
<223> n=A, T, C, or G.

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gcaaagccat gcacaaaact acctccctag agaaaggcta gtccctttc ttccccattc 180
atttcattat gaacatagta gaaaacagca tattcttatc aaatttgatg aaaagcgcca 240
acacgtttga actgaaatac gacttgtcat gtgaactgta ccgaatgtct acgtattcca 300
cttttcctgc tggggttcct gtctcagaaa ggagtcttgc tcgtgctggt ttctattaca 360
ctggtgtgaa tgacaaggtc aaatgcttct gttgtggcct gatgctggat aactggaaaa 420
gaggagacag tcctactgaa aagcataaaa agttgtatcc tagctgcaga ttcgttcaga 480
gtctaaattc cgttaacaac ttggaagcta cctctcagcc tacttttcct tcttcagtaa 540
cacattccac acactcatta cttccgggta cagaaaacag tggatatttc cgtggctctt 600

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gacctggaga cagagtggct tgctttgcct gtggtggaaa attgagcaat tgggaaccga 840
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agcttcaaga cacttcaaga tacacagttt ctaatctgag catgcagaca catgcagccc 960
gctttaaaac attctttaac tggccctcta gtgttctagt taatcctgag cagcttgcaa 1020
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accctcatct acttgaacag ctgctatcca catcagacag cccaggagat gaaaatgcag 1260
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tgacttgtgt aattccaatc ctggatagtc tactaactgc cggaattatt aatgaacaag 1620
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aagctgtgtt atatgagcat ttatttgtgc aacaggacat aaaatatatt cccacagaag 1800
atgtttcaga tctaccagtg gaagaacaat tgcggagact accagaagaa agaacatgta 1860
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aagtaaaact taagatattt gagttaacct ttaagaattt taaatatttt ggcattgtac 2340
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cagtgtccta tacatcgaag gtgtgcatat atgttgaatc acattttagg gacatggtgt 2580
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<210> 6
<211> 604
<212> PRT
<213> Homo sapiens

<400> 6

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            20                  25                  30
Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu Arg
        35                  40                  45
Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys Val
    50                  55                  60
Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Arg Gly Asp
65                  70                  75                  80
Ser Pro Thr Glu Lys His Lys Lys Leu Tyr Pro Ser Cys Arg Phe Val
                85                  90                  95
Gln Ser Leu Asn Ser Val Asn Asn Leu Glu Ala Thr Ser Gln Pro Thr
            100                 105                 110
Phe Pro Ser Ser Val Thr His Ser Thr His Ser Leu Leu Pro Gly Thr
        115                 120                 125
Glu Asn Ser Gly Tyr Phe Arg Gly Ser Tyr Ser Asn Ser Pro Ser Asn
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    130                 135                 140
Pro Val Asn Ser Arg Ala Asn Gln Glu Phe Ser Ala Leu Met Arg Ser
145                 150                 155                 160
Ser Tyr Pro Cys Pro Met Asn Asn Glu Asn Ala Arg Leu Leu Thr Phe
                165                 170                 175
Gln Thr Trp Pro Leu Thr Phe Leu Ser Pro Thr Asp Leu Ala Arg Ala
            180                 185                 190
Gly Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys
        195                 200                 205
Gly Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asn Ala Met Ser Glu
    210                 215                 220
His Leu Arg His Phe Pro Lys Cys Pro Phe Ile Glu Asn Gln Leu Gln
225                 230                 235                 240
Asp Thr Ser Arg Tyr Thr Val Ser Asn Leu Ser Met Gln Thr His Ala
                245                 250                 255
Ala Arg Phe Lys Thr Phe Phe Asn Trp Pro Ser Ser Val Leu Val Asn
            260                 265                 270
Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Asn Ser Asp
        275                 280                 285
Asp Val Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser
    290                 295                 300
Gly Asp Asp Pro Trp Val Gln His Ala Lys Trp Phe Pro Arg Cys Glu
305                 310                 315                 320
Tyr Leu Ile Arg Ile Lys Gly Gln Glu Phe Ile Arg Gln Val Gln Ala
                325                 330                 335
Ser Tyr Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Ser Pro
            340                 345                 350
Gly Asp Glu Asn Ala Glu Ser Ser Ile Ile His Leu Glu Pro Gly Glu
        355                 360                 365
Asp His Ser Glu Asp Ala Ile Met Met Asn Thr Pro Val Ile Asn Ala
    370                 375                 380
Ala Val Glu Met Gly Phe Ser Arg Ser Leu Val Lys Gln Thr Val Gln
385                 390                 395                 400
Arg Lys Ile Leu Ala Thr Gly Glu Asn Tyr Arg Leu Val Asn Asp Leu
                405                 410                 415
Val Leu Asp Leu Leu Asn Ala Glu Asp Glu Ile Arg Glu Glu Glu Arg
            420                 425                 430
Glu Arg Ala Thr Glu Glu Lys Glu Ser Asn Asp Leu Leu Leu Ile Arg
        435                 440                 445
Lys Asn Arg Met Ala Leu Phe Gln His Leu Thr Cys Val Ile Pro Ile
    450                 455                 460
Leu Asp Ser Leu Leu Thr Ala Gly Ile Ile Asn Glu Gln Glu His Asp
465                 470                 475                 480
Val Ile Lys Gln Lys Thr Gln Thr Ser Leu Gln Ala Arg Glu Leu Ile
                485                 490                 495
Asp Thr Ile Leu Val Lys Gly Asn Ile Ala Ala Thr Val Phe Arg Asn
            500                 505                 510
Ser Leu Gln Glu Ala Glu Ala Val Leu Tyr Glu His Leu Phe Val Gln
        515                 520                 525
Gln Asp Ile Lys Tyr Ile Pro Thr Glu Asp Val Ser Asp Leu Pro Val
    530                 535                 540
Glu Glu Gln Leu Arg Arg Leu Pro Glu Glu Arg Thr Cys Lys Val Cys
545                 550                 555                 560
Met Asp Lys Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val
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<210> 7
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<212> DNA
<213> Homo sapiens

<220>
<221> variation
<222> (1)...(2580)
<223> n=A, T, C or G.

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aattctagag cagttgaaga catctcttca tcgaggacta acccctacag ttatgcaatg 780
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<210> 8
<211> 618

<212> PRT
<213> Homo sapiens

<400> 8

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            20                  25                  30
Asn Ser Asn Lys Gln Lys Met Lys Tyr Asp Phe Ser Cys Glu Leu Tyr
        35                  40                  45
Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu
    50                  55                  60
Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys
65                  70                  75                  80
Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Leu Gly
                85                  90                  95
Asp Ser Pro Ile Gln Lys His Lys Gln Leu Tyr Pro Ser Cys Ser Phe
            100                 105                 110
Ile Gln Asn Leu Val Ser Ala Ser Leu Gly Ser Thr Ser Lys Asn Thr
        115                 120                 125
Ser Pro Met Arg Asn Ser Phe Ala His Ser Leu Ser Pro Thr Leu Glu
    130                 135                 140
His Ser Ser Leu Phe Ser Gly Ser Tyr Ser Ser Leu Pro Pro Asn Pro
145                 150                 155                 160
Leu Asn Ser Arg Ala Val Glu Asp Ile Ser Ser Ser Arg Thr Asn Pro
                165                 170                 175
Tyr Ser Tyr Ala Met Ser Thr Glu Glu Ala Arg Phe Leu Thr Tyr His
            180                 185                 190
Met Trp Pro Leu Thr Phe Leu Ser Pro Ser Glu Leu Ala Arg Ala Gly
        195                 200                 205
Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys Gly
    210                 215                 220
Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asp Ala Met Ser Glu His
225                 230                 235                 240
Arg Arg His Phe Pro Asn Cys Pro Phe Leu Glu Asn Ser Leu Glu Thr
                245                 250                 255
Leu Arg Phe Ser Ile Ser Asn Leu Ser Met Gln Thr His Ala Ala Arg
            260                 265                 270
Met Arg Thr Phe Met Tyr Trp Pro Ser Ser Val Pro Val Gln Pro Glu
        275                 280                 285
Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Arg Asn Asp Asp Val
    290                 295                 300
Lys Cys Phe Gly Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser Gly Asp
305                 310                 315                 320
Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg Cys Glu Phe Leu
                325                 330                 335
Ile Arg Met Lys Gly Gln Glu Phe Val Asp Glu Ile Gln Gly Arg Tyr
            340                 345                 350
Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Thr Thr Gly Glu
        355                 360                 365
Glu Asn Ala Asp Pro Pro Ile Ile His Phe Gly Pro Gly Glu Ser Ser
    370                 375                 380
Ser Glu Asp Ala Val Met Met Asn Thr Pro Val Val Lys Ser Ala Leu
385                 390                 395                 400
Glu Met Gly Phe Asn Arg Asp Leu Val Lys Gln Thr Val Leu Ser Lys
                405                 410                 415
Ile Leu Thr Thr Gly Glu Asn Tyr Lys Thr Val Asn Asp Ile Val Ser
            420                 425                 430
Ala Leu Leu Asn Ala Glu Asp Glu Lys Arg Glu Glu Glu Lys Glu Lys
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        435                 440                 445
Gln Ala Glu Glu Met Ala Ser Asp Asp Leu Ser Leu Ile Arg Lys Asn
    450                 455                 460
Arg Met Ala Leu Phe Gln Gln Leu Thr Cys Val Leu Pro Ile Leu Asp
465                 470                 475                 480
Asn Leu Leu Lys Ala Asn Val Ile Asn Lys Gln Glu His Asp Ile Ile
                485                 490                 495
Lys Gln Lys Thr Gln Ile Pro Leu Gln Ala Arg Glu Leu Ile Asp Thr
            500                 505                 510
Ile Trp Val Lys Gly Asn Ala Ala Ala Asn Ile Phe Lys Asn Cys Leu
        515                 520                 525
Lys Glu Ile Asp Ser Thr Leu Tyr Lys Asn Leu Phe Val Asp Lys Asn
    530                 535                 540
Met Lys Tyr Ile Pro Thr Glu Asp Val Ser Gly Leu Ser Leu Glu Glu
545                 550                 555                 560
Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Met Asp
                565                 570                 575
Lys Glu Val Ser Val Val Phe Ile Pro Cys Gly His Leu Val Val Cys
            580                 585                 590
Gln Glu Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg Gly Ile
        595                 600                 605
Ile Lys Gly Thr Val Arg Thr Phe Leu Ser
    610                 615
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<210> 9
<211> 2100
<212> DNA
<213> Mus musculus

<400> 9

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gagaagatga cttttaacag ttttgaagga actagaactt ttgtacttgc agacaccaat 180
aaggatgaag aatttgtaga agagtttaat agattaaaaa catttgctaa cttcccaagt 240
agtagtcctg tttcagcatc aacattggcg cgagctgggt ttctttatac cggtgaagga 300
gacaccgtgc aatgtttcag ttgtcatgcg gcaatagata gatggcagta tggagactca 360
gctgttggaa gacacaggag aatatcccca aattgcagat ttatcaatgg tttttatttt 420
gaaaatggtg ctgcacagtc tacaaatcct ggtatccaaa atggccagta caaatctgaa 480
aactgtgtgg gaaatagaaa tccttttgcc cctgacaggc cacctgagac tcatgctgat 540
tatctcttga gaactggaca ggttgtagat atttcagaca ccatataccc gaggaaccct 600
gccatgtgta gtgaagaagc cagattgaag tcatttcaga actggccgga ctatgctcat 660
ttaaccccca gagagttagc tagtgctggc ctctactaca caggggctga tgatcaagtg 720
caatgctttt gttgtggggg aaaactgaaa aattgggaac cctgtgatcg tgcctggtca 780
gaacacagga gacactttcc caattgcttt tttgttttgg gccggaacgt taatgttcga 840
agtgaatctg gtgtgagttc tgataggaat ttcccaaatt caacaaactc tccaagaaat 900
ccagccatgg cagaatatga agcacggatc gttacttttg gaacatggat atactcagtt 960
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tgcttccact gtggaggagg gctcacggat tggaagccaa gtgaagaccc ctgggaccag 1080
catgctaagt gctacccagg gtgcaaatac ctattggatg agaaggggca agaatatata 1140
aataatattc atttaaccca tccacttgag gaatctttgg gaagaactgc tgaaaaaaca 1200
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tccgggagca gctatctatc acttgaggtc ctgattgcag atcttgtgag tgctcagaaa 1380
gataatacgg aggatgagtc aagtcaaact tcattgcaga aagacattag tactgaagag 1440
cagctaaggc gcctacaaga ggagaagctt tccaaaatct gtatggatag aaatattgct 1500
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aaatgtccca tgtgctacac cgtcattacg ttcaaccaaa aaatttttat gtcttagtgg 1620
ggcaccacat gttatgttct tcttgctcta attgaatgtg taatgggagc gaactttaag 1680
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taatcctgca tttgcattcc attagcatcc tgctgtttcc aaatggagac caatgctaac 1740
agcactgttt ccgtctaaac attcaatttc tggatctttc gagttatcag ctgtatcatt 1800
tagccagtgt tttactcgat tgaaacctta gacagagaag cattttatag cttttcacat 1860
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tcatgccttt tgcataagct taacaaatgg agtgttctgt ataagcatgg agatgtgatg 1980
gaatctgccc aatgacttta attggcttat tgtaaacacg gaaagaactg ccccacgctg 2040
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<210> 10
<211> 496
<212> PRT
<213> Homo sapiens

<400> 10

Met	Thr	Phe	Asn	Ser	Phe	Glu	Gly	Thr	Arg	Thr	Phe	Val	Leu	Ala	Asp
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Thr	Asn	Lys	Asp	Glu	Glu	Phe	Val	Glu	Glu	Phe	Asn	Arg	Leu	Lys	Thr
			20					25					30		
Phe	Ala	Asn	Phe	Pro	Ser	Ser	Ser	Pro	Val	Ser	Ala	Ser	Thr	Leu	Ala
		35					40					45			
Arg	Ala	Gly	Phe	Leu	Tyr	Thr	Gly	Glu	Gly	Asp	Thr	Val	Gln	Cys	Phe
	50					55					60				
Ser	Cys	His	Ala	Ala	Ile	Asp	Arg	Trp	Gln	Tyr	Gly	Asp	Ser	Ala	Val
65					70					75					80
Gly	Arg	His	Arg	Arg	Ile	Ser	Pro	Asn	Cys	Arg	Phe	Ile	Asn	Gly	Phe
				85					90					95	
Tyr	Phe	Glu	Asn	Gly	Ala	Ala	Gln	Ser	Thr	Asn	Pro	Gly	Ile	Gln	Asn
			100					105					110		
Gly	Gln	Tyr	Lys	Ser	Glu	Asn	Cys	Val	Gly	Asn	Arg	Asn	Pro	Phe	Ala
		115					120					125			
Pro	Asp	Arg	Pro	Pro	Glu	Thr	His	Ala	Asp	Tyr	Leu	Leu	Arg	Thr	Gly
	130					135					140				
Gln	Val	Val	Asp	Ile	Ser	Asp	Thr	Ile	Tyr	Pro	Arg	Asn	Pro	Ala	Met
145					150					155					160
Cys	Ser	Glu	Glu	Ala	Arg	Leu	Lys	Ser	Phe	Gln	Asn	Trp	Pro	Asp	Tyr
				165					170					175	
Ala	His	Leu	Thr	Pro	Arg	Glu	Leu	Ala	Ser	Ala	Gly	Leu	Tyr	Tyr	Thr
			180					185					190		
Gly	Ala	Asp	Asp	Gln	Val	Gln	Cys	Phe	Cys	Cys	Gly	Gly	Lys	Leu	Lys
		195					200					205			
Asn	Trp	Glu	Pro	Cys	Asp	Arg	Ala	Trp	Ser	Glu	His	Arg	Arg	His	Phe
	210					215					220				
Pro	Asn	Cys	Phe	Phe	Val	Leu	Gly	Arg	Asn	Val	Asn	Val	Arg	Ser	Glu
225					230					235					240
Ser	Gly	Val	Ser	Ser	Asp	Arg	Asn	Phe	Pro	Asn	Ser	Thr	Asn	Ser	Pro
				245					250					255	
Arg	Asn	Pro	Ala	Met	Ala	Glu	Tyr	Glu	Ala	Arg	Ile	Val	Thr	Phe	Gly
			260					265					270		
Thr	Trp	Ile	Tyr	Ser	Val	Asn	Lys	Glu	Gln	Leu	Ala	Arg	Ala	Gly	Phe
		275					280					285			
Tyr	Ala	Leu	Gly	Glu	Gly	Asp	Lys	Val	Lys	Cys	Phe	His	Cys	Gly	Gly
	290					295					300				
Gly	Leu	Thr	Asp	Trp	Lys	Pro	Ser	Glu	Asp	Pro	Trp	Asp	Gln	His	Ala
305					310					315					320
Lys	Cys	Tyr	Pro	Gly	Cys	Lys	Tyr	Leu	Leu	Asp	Glu	Lys	Gly	Gln	Glu
				325					330					335	
Tyr	Ile	Asn	Asn	Ile	His	Leu	Thr	His	Pro	Leu	Glu	Glu	Ser	Leu	Gly
			340					345					350		

```
Arg Thr Ala Glu Lys Thr Pro Pro Leu Thr Lys Lys Ile Asp Asp Thr
        355                 360                 365
Ile Phe Gln Asn Pro Met Val Gln Glu Ala Ile Arg Met Gly Phe Ser
    370                 375                 380
Phe Lys Asp Leu Lys Lys Thr Met Glu Glu Lys Ile Gln Thr Ser Gly
385                 390                 395                 400
Ser Ser Tyr Leu Ser Leu Glu Val Leu Ile Ala Asp Leu Val Ser Ala
                405                 410                 415
Gln Lys Asp Asn Thr Glu Asp Glu Ser Ser Gln Thr Ser Leu Gln Lys
            420                 425                 430
Asp Ile Ser Thr Glu Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys Leu
        435                 440                 445
Ser Lys Ile Cys Met Asp Arg Asn Ile Ala Ile Val Phe Phe Pro Cys
    450                 455                 460
Gly His Leu Ala Thr Cys Lys Gln Cys Ala Glu Ala Val Asp Lys Cys
465                 470                 475                 480
Pro Met Cys Tyr Thr Val Ile Thr Phe Asn Gln Lys Ile Phe Met Ser
                485                 490                 495
```

<210> 11
<211> 67
<212> PRT
<213> Orgyia pseudotsugata

<400> 11
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Lys Ala Ala Arg Leu Gly Thr Tyr Thr Asn Trp Pro Val Gln Phe Leu
 1               5                  10                  15
Glu Pro Ser Arg Met Ala Ala Ser Gly Phe Tyr Tyr Leu Gly Arg Gly
            20                  25                  30
Asp Glu Val Arg Cys Ala Phe Cys Lys Val Glu Ile Thr Asn Trp Val
        35                  40                  45
Arg Gly Asp Asp Pro Glu Thr Asp His Lys Arg Trp Ala Pro Gln Cys
    50                  55                  60
Pro Phe Val
65
```

<210> 12
<211> 275
<212> PRT
<213> Cydia pomonella

<400> 12
```
Met Ser Asp Leu Arg Leu Glu Glu Val Arg Leu Asn Thr Phe Glu Lys
 1               5                  10                  15
Trp Pro Val Ser Phe Leu Ser Pro Glu Thr Met Ala Lys Asn Gly Phe
            20                  25                  30
Tyr Tyr Leu Gly Arg Ser Asp Glu Val Arg Cys Ala Phe Cys Lys Val
        35                  40                  45
Glu Ile Met Arg Trp Lys Glu Gly Glu Asp Pro Ala Ala Asp His Lys
    50                  55                  60
Lys Trp Ala Pro Gln Cys Pro Phe Val Lys Gly Ile Asp Val Cys Gly
65                  70                  75                  80
Ser Ile Val Thr Thr Asn Asn Ile Gln Asn Thr Thr Thr His Asp Thr
                85                  90                  95
Ile Ile Gly Pro Ala His Pro Lys Tyr Ala His Glu Ala Ala Arg Val
            100                 105                 110
Lys Ser Phe His Asn Trp Pro Arg Cys Met Lys Gln Arg Pro Glu Gln
```

```
        115                 120                 125
Met Ala Asp Ala Gly Phe Phe Tyr Thr Gly Tyr Gly Asp Asn Thr Lys
    130                 135                 140
Cys Phe Tyr Cys Asp Gly Gly Leu Lys Asp Trp Glu Pro Glu Asp Val
145                 150                 155                 160
Pro Trp Glu Gln His Val Arg Trp Phe Asp Arg Cys Ala Tyr Val Gln
                165                 170                 175
Leu Val Lys Gly Arg Asp Tyr Val Gln Lys Val Ile Thr Glu Ala Cys
            180                 185                 190
Val Leu Pro Gly Glu Asn Thr Thr Val Ser Thr Ala Ala Pro Val Ser
        195                 200                 205
Glu Pro Ile Pro Glu Thr Lys Ile Glu Lys Glu Pro Gln Val Glu Asp
    210                 215                 220
Ser Lys Leu Cys Lys Ile Cys Tyr Val Glu Glu Cys Ile Val Cys Phe
225                 230                 235                 240
Val Pro Cys Gly His Val Val Ala Cys Ala Lys Cys Ala Leu Ser Val
                245                 250                 255
Asp Lys Cys Pro Met Cys Arg Lys Ile Val Thr Ser Val Leu Lys Val
            260                 265                 270
Tyr Phe Ser
        275
```

<210> 13
<211> 498
<212> PRT
<213> Drosophila melanogaster

<400> 13

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Met Thr Glu Leu Gly Met Glu Leu Glu Ser Val Arg Leu Ala Thr Phe
 1               5                  10                  15
Gly Glu Trp Pro Leu Asn Ala Pro Val Ser Ala Glu Asp Leu Val Ala
            20                  25                  30
Asn Gly Phe Phe Ala Thr Gly Lys Trp Leu Glu Ala Glu Cys His Phe
        35                  40                  45
Cys His Val Arg Ile Asp Arg Trp Glu Tyr Gly Asp Gln Val Ala Glu
    50                  55                  60
Arg His Arg Arg Ser Ser Pro Ile Cys Ser Met Val Leu Ala Pro Asn
65                  70                  75                  80
His Cys Gly Asn Val Pro Arg Ser Gln Glu Ser Asp Asn Glu Gly Asn
                85                  90                  95
Ser Val Val Asp Ser Pro Glu Ser Cys Ser Cys Pro Asp Leu Leu Leu
            100                 105                 110
Glu Ala Asn Arg Leu Val Thr Phe Lys Asp Trp Pro Asn Pro Asn Ile
        115                 120                 125
Thr Pro Gln Ala Leu Ala Lys Ala Gly Phe Tyr Tyr Leu Asn Arg Leu
    130                 135                 140
Asp His Val Lys Cys Val Trp Cys Asn Gly Val Ile Ala Lys Trp Glu
145                 150                 155                 160
Lys Asn Asp Asn Ala Phe Glu Glu His Lys Arg Phe Phe Pro Gln Cys
                165                 170                 175
Pro Arg Val Gln Met Gly Pro Leu Ile Glu Phe Ala Thr Gly Lys Asn
            180                 185                 190
Leu Asp Glu Leu Gly Ile Gln Pro Thr Thr Leu Pro Leu Arg Pro Lys
        195                 200                 205
Tyr Ala Cys Val Asp Ala Arg Leu Arg Thr Phe Thr Asp Trp Pro Ile
    210                 215                 220
Ser Asn Ile Gln Pro Ala Ser Ala Leu Ala Gln Ala Gly Leu Tyr Tyr
225                 230                 235                 240
```

```
Gln Lys Ile Gly Asp Gln Val Arg Cys Phe His Cys Asn Ile Gly Leu
                245                 250                 255
Arg Ser Trp Gln Lys Glu Asp Glu Pro Trp Phe Glu His Ala Lys Trp
            260                 265                 270
Ser Pro Lys Cys Gln Phe Val Leu Leu Ala Lys Gly Pro Ala Tyr Val
        275                 280                 285
Ser Glu Val Leu Ala Thr Thr Ala Ala Asn Ala Ser Ser Gln Pro Ala
    290                 295                 300
Thr Ala Pro Ala Pro Thr Leu Gln Ala Asp Val Leu Met Asp Glu Ala
305                 310                 315                 320
Pro Ala Lys Glu Ala Leu Thr Leu Gly Ile Asp Gly Gly Val Val Arg
                325                 330                 335
Asn Ala Ile Gln Arg Lys Leu Leu Ser Ser Gly Cys Ala Phe Ser Thr
            340                 345                 350
Leu Asp Glu Leu Leu His Asp Ile Phe Asp Asp Ala Gly Ala Gly Ala
        355                 360                 365
Ala Leu Glu Val Arg Glu Pro Pro Glu Pro Ser Ala Pro Phe Ile Glu
    370                 375                 380
Pro Cys Gln Ala Thr Thr Ser Lys Ala Ala Ser Val Pro Ile Pro Val
385                 390                 395                 400
Ala Asp Ser Ile Pro Ala Lys Pro Gln Ala Ala Glu Ala Val Ser Asn
                405                 410                 415
Ile Ser Lys Ile Thr Asp Glu Ile Gln Lys Met Ser Val Ser Thr Pro
            420                 425                 430
Asn Gly Asn Leu Ser Leu Glu Glu Glu Asn Arg Gln Leu Lys Asp Ala
        435                 440                 445
Arg Leu Cys Lys Val Cys Leu Asp Glu Glu Val Gly Val Val Phe Leu
    450                 455                 460
Pro Cys Gly His Leu Ala Thr Cys Asn Gln Cys Ala Pro Ser Val Ala
465                 470                 475                 480
Asn Cys Pro Met Cys Arg Ala Asp Ile Lys Gly Phe Val Arg Thr Phe
                485                 490                 495
Leu Ser
```

<210> 14
<211> 67
<212> PRT
<213> Cydia pomonella

<400> 14

```
Glu Glu Val Arg Leu Asn Thr Phe Glu Lys Trp Pro Val Ser Phe Leu
 1               5                  10                  15
Ser Pro Glu Thr Met Ala Lys Asn Gly Phe Tyr Tyr Leu Gly Arg Ser
            20                  25                  30
Asp Glu Val Arg Cys Ala Phe Cys Lys Val Glu Ile Met Arg Trp Lys
        35                  40                  45
Glu Gly Glu Asp Pro Ala Ala Asp His Lys Lys Trp Ala Pro Gln Cys
    50                  55                  60
Pro Phe Val
65
```

<210> 15
<211> 67
<212> PRT
<213> Homo sapiens

<400> 15
Glu Ala Asn Arg Leu Val Thr Phe Lys Asp Trp Pro Asn Pro Asn Ile
 1   5   10   15
Thr Pro Gln Ala Leu Ala Lys Ala Gly Phe Tyr Tyr Leu Asn Arg Leu
            20   25   30
Asp His Val Lys Cys Val Trp Cys Asn Gly Val Ile Ala Lys Trp Glu
        35   40   45
Lys Asn Asp Asn Ala Phe Glu Glu His Lys Arg Phe Phe Pro Gln Cys
    50   55   60
Pro Arg Val
65

<210> 16
<211> 68
<212> PRT
<213> Mus musculus

<400> 16
Glu Phe Asn Arg Leu Lys Thr Phe Ala Asn Phe Pro Ser Ser Ser Pro
 1   5   10   15
Val Ser Ala Ser Thr Leu Ala Arg Ala Gly Phe Leu Tyr Thr Gly Glu
            20   25   30
Gly Asp Thr Val Gln Cys Phe Ser Cys His Ala Ala Ile Asp Arg Trp
        35   40   45
Gln Tyr Gly Asp Ser Ala Val Gly Arg His Arg Arg Ile Ser Pro Asn
    50   55   60
Cys Arg Phe Ile
65

<210> 17
<211> 68
<212> PRT
<213> Homo sapiens

<400> 17
Glu Phe Asn Arg Leu Lys Thr Phe Ala Asn Phe Pro Ser Gly Ser Pro
 1   5   10   15
Val Ser Ala Ser Thr Leu Ala Arg Ala Gly Phe Leu Tyr Thr Gly Glu
            20   25   30
Gly Asp Thr Val Arg Cys Phe Ser Cys His Ala Ala Val Asp Arg Trp
        35   40   45
Gln Tyr Gly Asp Ser Ala Val Gly Arg His Arg Lys Val Ser Pro Asn
    50   55   60
Cys Arg Phe Ile
65

<210> 18
<211> 68
<212> PRT
<213> Homo sapiens

<400> 18
Glu Leu Tyr Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro
 1   5   10   15
Val Ser Glu Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val
            20   25   30

Asn Asp Lys Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp
35 40 45
Lys Arg Gly Asp Ser Pro Thr Glu Lys His Lys Lys Leu Tyr Pro Ser
50 55 60
Cys Arg Phe Val
65

<210> 19
<211> 68
<212> PRT
<213> Homo sapiens

<400> 19
Glu Leu Tyr Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro
1 5 10 15
Val Ser Glu Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val
20 25 30
Asn Asp Lys Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp
35 40 45
Lys Leu Gly Asp Ser Pro Ile Gln Lys His Lys Gln Leu Tyr Pro Ser
50 55 60
Cys Ser Phe Ile
65

<210> 20
<211> 68
<212> PRT
<213> Mus musculus

<400> 20
Glu Glu Ala Arg Leu Lys Ser Phe Gln Asn Trp Pro Asp Tyr Ala His
1 5 10 15
Leu Thr Pro Arg Glu Leu Ala Ser Ala Gly Leu Tyr Tyr Thr Gly Ala
20 25 30
Asp Asp Gln Val Gln Cys Phe Cys Cys Gly Gly Lys Leu Lys Asn Trp
35 40 45
Glu Pro Cys Asp Arg Ala Trp Ser Glu His Arg Arg His Phe Pro Asn
50 55 60
Cys Phe Phe Val
65

<210> 21
<211> 68
<212> PRT
<213> Homo sapiens

<400> 21
Glu Glu Ala Arg Leu Lys Ser Phe Gln Asn Trp Pro Asp Tyr Ala His
1 5 10 15
Leu Thr Pro Arg Glu Leu Ala Ser Ala Gly Leu Tyr Tyr Thr Gly Ile
20 25 30
Gly Asp Gln Val Gln Cys Phe Cys Cys Gly Gly Lys Leu Lys Asn Trp
35 40 45
Glu Pro Cys Asp Arg Ala Trp Ser Glu His Arg Arg His Phe Pro Asn
50 55 60
Cys Phe Phe Val

65

<210> 22
<211> 67
<212> PRT
<213> Homo sapiens

<400> 22
Glu Asn Ala Arg Leu Leu Thr Phe Gln Thr Trp Pro Leu Thr Phe Leu
1 5 10 15
Ser Pro Thr Asp Leu Ala Arg Ala Gly Phe Tyr Tyr Ile Gly Pro Gly
20 25 30
Asp Arg Val Ala Cys Phe Ala Cys Gly Gly Lys Leu Ser Asn Trp Glu
35 40 45
Pro Lys Asp Asn Ala Met Ser Glu His Leu Arg His Phe Pro Lys Cys
50 55 60
Pro Phe Ile
65

<210> 23
<211> 67
<212> PRT
<213> Homo sapiens

<400> 23
Glu Glu Ala Arg Phe Leu Thr Tyr His Met Trp Pro Leu Thr Phe Leu
1 5 10 15
Ser Pro Ser Glu Leu Ala Arg Ala Gly Phe Tyr Tyr Ile Gly Pro Gly
20 25 30
Asp Arg Val Ala Cys Phe Ala Cys Gly Gly Lys Leu Ser Asn Trp Glu
35 40 45
Pro Lys Asp Asp Ala Met Ser Glu His Arg Arg His Phe Pro Asn Cys
50 55 60
Pro Phe Leu
65

<210> 24
<211> 66
<212> PRT
<213> Mus musculus

<400> 24
Tyr Glu Ala Arg Ile Val Thr Phe Gly Thr Trp Ile Tyr Ser Val Asn
1 5 10 15
Lys Glu Gln Leu Ala Arg Ala Gly Phe Tyr Ala Leu Gly Glu Gly Asp
20 25 30
Lys Val Lys Cys Phe His Cys Gly Gly Gly Leu Thr Asp Trp Lys Pro
35 40 45
Ser Glu Asp Pro Trp Asp Gln His Ala Lys Cys Tyr Pro Gly Cys Lys
50 55 60
Tyr Leu
65

<210> 25
<211> 66

<212> PRT
<213> Homo sapiens

<400> 25
Tyr Glu Ala Arg Ile Phe Thr Phe Gly Thr Trp Ile Tyr Ser Val Asn
 1   5   10   15
Lys Glu Gln Leu Ala Arg Ala Gly Phe Tyr Ala Leu Gly Glu Gly Asp
            20   25   30
Lys Val Lys Cys Phe His Cys Gly Gly Gly Leu Thr Asp Trp Lys Pro
        35   40   45
Ser Glu Asp Pro Trp Glu Gln His Ala Lys Trp Tyr Pro Gly Cys Lys
    50   55   60
Tyr Leu
65

<210> 26
<211> 68
<212> PRT
<213> Homo sapiens

<400> 26
His Ala Ala Arg Phe Lys Thr Phe Phe Asn Trp Pro Ser Ser Val Leu
 1   5   10   15
Val Asn Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Asn
            20   25   30
Ser Asp Asp Val Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp
        35   40   45
Glu Ser Gly Asp Asp Pro Trp Val Gln His Ala Lys Trp Phe Pro Arg
    50   55   60
Cys Glu Tyr Leu
65

<210> 27
<211> 68
<212> PRT
<213> Homo sapiens

<400> 27
His Ala Ala Arg Met Arg Thr Phe Met Tyr Trp Pro Ser Ser Val Pro
 1   5   10   15
Val Gln Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Arg
            20   25   30
Asn Asp Asp Val Lys Cys Phe Gly Cys Asp Gly Gly Leu Arg Cys Trp
        35   40   45
Glu Ser Gly Asp Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg
    50   55   60
Cys Glu Phe Leu
65

<210> 28
<211> 68
<212> PRT
<213> Orgyia pseudotsugata

<400> 28
Glu Ala Ala Arg Leu Arg Thr Phe Ala Glu Trp Pro Arg Gly Leu Lys

```
 1               5                  10                  15
Gln Arg Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr Thr Gly Gln
            20                  25                  30
Gly Asp Lys Thr Arg Cys Phe Cys Cys Asp Gly Gly Leu Lys Asp Trp
        35                  40                  45
Glu Pro Asp Asp Ala Pro Trp Gln Gln His Ala Arg Trp Tyr Asp Arg
    50                  55                  60
Cys Glu Tyr Val
65
```

<210> 29
<211> 68
<212> PRT
<213> Cydia pomonella

<400> 29

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Glu Ala Ala Arg Val Lys Ser Phe His Asn Trp Pro Arg Cys Met Lys
 1               5                  10                  15
Gln Arg Pro Glu Gln Met Ala Asp Ala Gly Phe Phe Tyr Thr Gly Tyr
            20                  25                  30
Gly Asp Asn Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu Lys Asp Trp
        35                  40                  45
Glu Pro Glu Asp Val Pro Trp Glu Gln His Val Arg Trp Phe Asp Arg
    50                  55                  60
Cys Ala Tyr Val
65
```

<210> 30
<211> 68
<212> PRT
<213> Drosophila melanogaster

<400> 30

```
Val Asp Ala Arg Leu Arg Thr Phe Thr Asp Trp Pro Ile Ser Asn Ile
 1               5                  10                  15
Gln Pro Ala Ser Ala Leu Ala Gln Ala Gly Leu Tyr Tyr Gln Lys Ile
            20                  25                  30
Gly Asp Gln Val Arg Cys Phe His Cys Asn Ile Gly Leu Arg Ser Trp
        35                  40                  45
Gln Lys Glu Asp Glu Pro Trp Phe Glu His Ala Lys Trp Ser Pro Lys
    50                  55                  60
Cys Gln Phe Val
65
```

<210> 31
<211> 66
<212> PRT
<213> Drosophila melanogaster

<400> 31

```
Glu Ser Val Arg Leu Ala Thr Phe Gly Glu Trp Pro Leu Asn Ala Pro
 1               5                  10                  15
Val Ser Ala Glu Asp Leu Val Ala Asn Gly Phe Phe Gly Thr Trp Met
            20                  25                  30
Glu Ala Glu Cys Asp Phe Cys His Val Arg Ile Asp Arg Trp Glu Tyr
        35                  40                  45
```

```
Gly Asp Leu Val Ala Glu Arg His Arg Arg Ser Ser Pro Ile Cys Ser
    50                  55                  60
Met Val
65
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<210> 32
<211> 46
<212> PRT
<213> Homo sapiens

<400> 32
Glu Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Met
 1               5                  10                  15
Asp Lys Glu Val Ser Val Val Phe Ile Pro Cys Gly His Leu Val Val
            20                  25                  30
Cys Gln Glu Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys
        35                  40                  45


<210> 33
<211> 46
<212> PRT
<213> Homo sapiens

<400> 33
Glu Gln Leu Arg Arg Leu Pro Glu Glu Arg Thr Cys Lys Val Cys Met
 1               5                  10                  15
Asp Lys Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val Val
            20                  25                  30
Cys Lys Asp Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys
        35                  40                  45


<210> 34
<211> 46
<212> PRT
<213> Homo sapiens

<400> 34
Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys Leu Ser Lys Ile Cys Met
 1               5                  10                  15
Asp Arg Asn Ile Ala Ile Val Phe Phe Pro Cys Gly His Leu Ala Thr
            20                  25                  30
Cys Lys Gln Cys Ala Glu Ala Val Asp Lys Cys Pro Met Cys
        35                  40                  45


<210> 35
<211> 46
<212> PRT
<213> Homo sapiens

<400> 35
Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys Leu Cys Lys Ile Cys Met
 1               5                  10                  15
Asp Arg Asn Ile Ala Ile Val Phe Val Pro Cys Gly His Leu Val Thr
            20                  25                  30
Cys Lys Gln Cys Ala Glu Ala Val Asp Lys Cys Pro Met Cys
```

35 40 45

<210> 36
<211> 46
<212> PRT
<213> Drosophila melanogaster

<400> 36
Glu Glu Asn Arg Gln Leu Lys Asp Ala Arg Leu Cys Lys Val Cys Leu
1 5 10 15
Asp Glu Glu Val Gly Val Val Phe Leu Pro Cys Gly His Leu Ala Thr
20 25 30
Cys Asn Gln Cys Ala Pro Ser Val Ala Asn Cys Pro Met Cys
35 40 45

<210> 37
<211> 46
<212> PRT
<213> Cydia pomonella

<400> 37
Glu Lys Glu Pro Gln Val Glu Asp Ser Lys Leu Cys Lys Ile Cys Tyr
1 5 10 15
Val Glu Glu Cys Ile Val Cys Phe Val Pro Cys Gly His Val Val Ala
20 25 30
Cys Ala Lys Cys Ala Leu Ser Val Asp Lys Cys Pro Met Cys
35 40 45

<210> 38
<211> 46
<212> PRT
<213> Orgyia pseudotsugata

<400> 38
Ala Val Glu Ala Glu Val Ala Asp Asp Arg Leu Cys Lys Ile Cys Leu
1 5 10 15
Gly Ala Glu Lys Thr Val Cys Phe Val Pro Cys Gly His Val Val Ala
20 25 30
Cys Gly Lys Cys Ala Ala Gly Val Thr Thr Cys Pro Val Cys
35 40 45

<210> 39
<211> 2474
<212> DNA
<213> Mus musculus

<400> 39
gaattccggg agacctacac ccccggagat cagaggtcat tgctggcgtt cagagcctag 60
gaagtgggct gcggtatcag cctagcagta aaaccgacca gaagccatgc acaaaactac 120
atccccagag aaagacttgt cccttcccct ccctgtcatc tcaccatgaa catggttcaa 180
gacagcgcct ttctagccaa gctgatgaag agtgctgaca cctttgagtt gaagtatgac 240
ttttcctgtg agctgtaccg attgtccacg tattcagctt ttcccagggg agttcctgtg 300
tcagaaagga gtctggctcg tgctggcttt tactacactg gtgccaatga caaggtcaag 360
tgcttctgct gtggcctgat gctagacaac tggaaacaag gggacagtcc catggagaag 420
cacagaaagt tgtaccccag ctgcaacttt gtacagactt tgaatccagc caacagtctg 480

gaagctagtc ctcggccttc tcttccttcc acggcgatga gcaccatgcc tttgagcttt 540
gcaagttctg agaatactgg ctatttcagt ggctcttact cgagctttcc ctcagaccct 600
gtgaacttcc gagcaaatca agattgtcct gctttgagca caagtcccta ccactttgca 660
atgaacacag agaaggccag attactcacc tatgaaacat ggccattgtc ttttctgtca 720
ccagcaaagc tggccaaagc aggcttctac tacataggac ctggagatag agtggcctgc 780
tttgcgtgcg atgggaaact gagcaactgg gaacgtaagg atgatgctat gtcagagcac 840
cagaggcatt tccccagctg tccgttctta aaagacttgg gtcagtctgc ttcgagatac 900
actgtctcta acctgagcat gcagacacac gcagcccgta ttagaacatt ctctaactgg 960
ccttctagtg cactagttca ttcccaggaa cttgcaagtg cgggctttta ttatacagga 1020
cacagtgatg atgtcaagtg tttatgctgt gatggtgggc tgaggtgctg ggaatctgga 1080
gatgacccct gggtggaaca tgccaagtgg tttccaaggt gtgagtactt gctcagaatc 1140
aaaggccaag aatttgtcag ccaagttcaa gctggctatc ctcatctact tgagcagcta 1200
ttatctacgt cagactcccc agaagatgag aatgcagacg cagcaatcgt gcattttggc 1260
cctggagaaa gttcggaaga tgtcgtcatg atgagcacgc ctgtggttaa agcagccttg 1320
gaaatgggct tcagtaggag cctggtgaga cagacggttc agtggcagat cctggccact 1380
ggtgagaact acaggaccgt cagtgacctc gttataggct tactcgatgc agaagacgag 1440
atgagagagg agcagatgga gcaggcggcc gaggaggagg agtcagatga tctagcacta 1500
atccggaaga acaaaatggt gcttttccaa catttgacgt gtgtgacacc aatgctgtat 1560
tgcctcctaa gtgcaagggc catcactgaa caggagtgca atgctgtgaa acagaaacca 1620
cacaccttac aagcaagcac actgattgat actgtgttag caaaaggaaa cactgcagca 1680
acctcattca gaaactccct tcgggaaatt gaccctgcgt tatacagaga tatatttgtg 1740
caacaggaca ttaggagtct tcccacagat gacattgcag ctctaccaat ggaagaacag 1800
ttgcggcccc tcccggagga cagaatgtgt aaagtgtgta tggaccgaga ggtatccatc 1860
gtgttcattc cctgtggcca tctggtcgtg tgcaaagact gcgctccctc tctgaggaag 1920
tgtcccatct gtagagggac catcaagggc acagtgcgca catttctctc ctgaacaaga 1980
ctaatggtcc atggctgcaa cttcagccag gaggaagttc actgtcactc ccagttccat 2040
tcggaacttg aggccagcct ggatagcacg agacaccgcc aaacacacaa atataaacat 2100
gaaaaacttt tgtctgaagt caagaatgaa tgaattactt atataataat tttaattggt 2160
ttccttaaaa gtgctatttg ttcccaactc agaaaattgt tttctgtaaa catatttaca 2220
tactacctgc atctaaagta ttcatatatt catatattca gatgtcatga gagagggttt 2280
tgttcttgtt cctgaaaagc tggtttatca tctgatcagc atatactgcg caacgggcag 2340
ggctagaatc catgaaccaa gctgcaaaga tctcacgcta aataaggcgg aaagatttgg 2400
agaaacgaaa ggaaattctt tcctgtccaa tgtatactct tcagactaat gacctcttcc 2460
tatcaagcct tcta 2474

<210> 40
<211> 602
<212> PRT
<213> Mus musculus

<400> 40
Met Asn Met Val Gln Asp Ser Ala Phe Leu Ala Lys Leu Met Lys Ser
 1   5   10   15
Ala Asp Thr Phe Glu Leu Lys Tyr Asp Phe Ser Cys Glu Leu Tyr Arg
            20   25   30
Leu Ser Thr Tyr Ser Ala Phe Pro Arg Gly Val Pro Val Ser Glu Arg
        35   40   45
Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Ala Asn Asp Lys Val
    50   55   60
Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Gln Gly Asp
65   70   75   80
Ser Pro Met Glu Lys His Arg Lys Leu Tyr Pro Ser Cys Asn Phe Val
                85   90   95
Gln Thr Leu Asn Pro Ala Asn Ser Leu Glu Ala Ser Pro Arg Pro Ser
            100   105   110
Leu Pro Ser Thr Ala Met Ser Thr Met Pro Leu Ser Phe Ala Ser Ser
        115   120   125
Glu Asn Thr Gly Tyr Phe Ser Gly Ser Tyr Ser Ser Phe Pro Ser Asp
    130   135   140

```
Pro Val Asn Phe Arg Ala Asn Gln Asp Cys Pro Ala Leu Ser Thr Ser
145                 150                 155                 160
Pro Tyr His Phe Ala Met Asn Thr Glu Lys Ala Arg Leu Leu Thr Tyr
                165                 170                 175
Glu Thr Trp Pro Leu Ser Phe Leu Ser Pro Ala Lys Leu Ala Lys Ala
            180                 185                 190
Gly Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys
        195                 200                 205
Asp Gly Lys Leu Ser Asn Trp Glu Arg Lys Asp Asp Ala Met Ser Glu
    210                 215                 220
His Gln Arg His Phe Pro Ser Cys Pro Phe Leu Lys Asp Leu Gly Gln
225                 230                 235                 240
Ser Ala Ser Arg Tyr Thr Val Ser Asn Leu Ser Met Gln Thr His Ala
                245                 250                 255
Ala Arg Ile Arg Thr Phe Ser Asn Trp Pro Ser Ser Ala Leu Val His
            260                 265                 270
Ser Gln Glu Leu Ala Ser Ala Gly Phe Tyr Tyr Thr Gly His Ser Asp
        275                 280                 285
Asp Val Lys Cys Leu Cys Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser
    290                 295                 300
Gly Asp Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg Cys Glu
305                 310                 315                 320
Tyr Leu Leu Arg Ile Lys Gly Gln Glu Phe Val Ser Gln Val Gln Ala
                325                 330                 335
Gly Tyr Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Ser Pro
            340                 345                 350
Glu Asp Glu Asn Ala Asp Ala Ala Ile Val His Phe Gly Pro Gly Glu
        355                 360                 365
Ser Ser Glu Asp Val Val Met Met Ser Thr Pro Val Val Lys Ala Ala
    370                 375                 380
Leu Glu Met Gly Phe Ser Arg Ser Leu Val Arg Gln Thr Val Gln Trp
385                 390                 395                 400
Gln Ile Leu Ala Thr Gly Glu Asn Tyr Arg Thr Val Ser Asp Leu Val
                405                 410                 415
Ile Gly Leu Leu Asp Ala Glu Asp Glu Met Arg Glu Glu Gln Met Glu
            420                 425                 430
Gln Ala Ala Glu Glu Glu Glu Ser Asp Asp Leu Ala Leu Ile Arg Lys
        435                 440                 445
Asn Lys Met Val Leu Phe Gln His Leu Thr Cys Val Thr Pro Met Leu
    450                 455                 460
Tyr Cys Leu Leu Ser Ala Arg Ala Ile Thr Glu Gln Glu Cys Asn Ala
465                 470                 475                 480
Val Lys Gln Lys Pro His Thr Leu Gln Ala Ser Thr Leu Ile Asp Thr
                485                 490                 495
Val Leu Ala Lys Gly Asn Thr Ala Ala Thr Ser Phe Arg Asn Ser Leu
            500                 505                 510
Arg Glu Ile Asp Pro Ala Leu Tyr Arg Asp Ile Phe Val Gln Gln Asp
        515                 520                 525
Ile Arg Ser Leu Pro Thr Asp Asp Ile Ala Ala Leu Pro Met Glu Glu
    530                 535                 540
Gln Leu Arg Pro Leu Pro Glu Asp Arg Met Cys Lys Val Cys Met Asp
545                 550                 555                 560
Arg Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val Val Cys
                565                 570                 575
Lys Asp Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg Gly Thr
            580                 585                 590
Ile Lys Gly Thr Val Arg Thr Phe Leu Ser
        595                 600
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<210> 41
<211> 2416
<212> DNA
<213> Mus musculus

<400> 41
ctgtggtgga gatctattgt ccaagtggtg agaaacttca tctggaagtt taagcggtca 60
gaaatactat tactactcat ggacaaaact gtctcccaga gactcgccca aggtacctta 120
cacccaaaaa cttaaacgta taatggagaa gagcacaatc ttgtcaaatt ggacaaagga 180
gagcgaagaa aaaatgaagt ttgacttttc gtgtgaactc taccgaatgt ctacatattc 240
agcttttccc aggggagttc ctgtctcaga gaggagtctg gctcgtgctg gcttttatta 300
tacaggtgtg aatgacaaag tcaagtgctt ctgctgtggc ctgatgttgg ataactggaa 360
acaaggggac agtcctgttg aaaagcacag acagttctat cccagctgca gctttgtaca 420
gactctgctt tcagccagtc tgcagtctcc atctaagaat atgtctcctg tgaaaagtag 480
atttgcacat tcgtcacctc tggaacgagg tggcattcac tccaacctgt gctctagccc 540
tcttaattct agagcagtgg aagacttctc atcaaggatg gatccctgca gctatgccat 600
gagtacagaa gaggccagat ttcttactta cagtatgtgg cctttaagtt ttctgtcacc 660
agcagagctg gccagagctg gcttctatta catagggcct ggagacaggg tggcctgttt 720
tgcctgtggt gggaaactga gcaactggga accaaaggat tatgctatgt cagagcaccg 780
cagacatttt ccccactgtc catttctgga aaatacttca gaaacacaga ggtttagtat 840
atcaaatcta agtatgcaga cacactctgc tcgattgagg acatttctgt actggccacc 900
tagtgttcct gttcagcccg agcagcttgc aagtgctgga ttctattacg tggatcgcaa 960
tgatgatgtc aagtgccttt gttgtgatgg tggcttgaga tgttgggaac ctggagatga 1020
cccctggata gaacacgcca aatggtttcc aaggtgtgag ttcttgatac ggatgaaggg 1080
tcaggagttt gttgatgaga ttcaagctag atatcctcat cttcttgagc agctgttgtc 1140
cacttcagac accccaggag aagaaaatgc tgaccctaca gagacagtgg tgcattttgg 1200
ccctggagaa agttcgaaag atgtcgtcat gatgagcacg cctgtggtta aagcagcctt 1260
ggaaatgggc ttcagtagga gcctggtgag acagacggtt cagcggcaga tcctggccac 1320
tggtgagaac tacaggaccg tcaatgatat tgtctcagta cttttgaatg ctgaagatga 1380
gagaagagaa gaggagaagg aaagacagac tgaagagatg gcatcaggtg acttatcact 1440
gattcggaag aatagaatgg ccctctttca acagttgaca catgtccttc ctatcctgga 1500
taatcttctt gaggccagtg taattacaaa acaggaacat gatattatta gacagaaaac 1560
acagataccc ttacaagcaa gagagcttat tgacaccgtt ttagtcaagg gaaatgctgc 1620
agccaacatc ttcaaaaact ctctgaaggg aattgactcc acgttatatg aaaacttatt 1680
tgtggaaaag aatatgaagt atattccaac agaagacgtt tcaggcttgt cattggaaga 1740
gcagttgcgg agattacaag aagaacgaac ttgcaaagtg tgtatggaca gagaggtttc 1800
tattgtgttc attccgtgtg gtcatctagt agtctgccag gaatgtgccc cttctctaag 1860
gaagtgcccc atctgcaggg ggacaatcaa ggggactgtg cgcacatttc tctcatgagt 1920
gaagaatggt ctgaaagtat tgttggacat cagaagctgt cagaacaaag aatgaactac 1980
tgatttcagc tcttcagcag gacattctac tctctttcaa gattagtaat cttgctttat 2040
gaagggtagc attgtatatt taagcttagt ctgttgcaag ggaaggtcta tgctgttgag 2100
ctacaggact gtgtctgttc cagagcagga gttgggatgc ttgctgtatg tccttcagga 2160
cttcttggga tttgggaatt tggggaaagc tttggaatcc agtgatgtgg agctcagaaa 2220
tcctggaacc agtgactctg gtactcagta gatagggtac cctgtacttc ttggtgcttt 2280
tccagtctgg gaaataagga ggaatctgct gctggtaaaa atttgctgga tgtgagaaat 2340
agatgaaagt gtttcgggtg ggggcgtgca tcagtgtagt gtgtgcaggg atgtatgcag 2400
gccaaacact gtgtag 2416

<210> 42
<211> 591
<212> PRT
<213> Mus musculus

<400> 42
Met Glu Lys Ser Thr Ile Leu Ser Asn Trp Thr Lys Glu Ser Glu Glu
 1   5   10   15
Lys Met Lys Phe Asp Phe Ser Cys Glu Leu Tyr Arg Met Ser Thr Tyr
            20   25   30
Ser Ala Phe Pro Arg Gly Val Pro Val Ser Glu Arg Ser Leu Ala Arg

```
        35                  40                  45
Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys Val Lys Cys Phe Cys
    50                  55                  60
Cys Gly Leu Met Leu Asp Asn Trp Lys Gln Gly Asp Ser Pro Val Glu
65                  70                  75                  80
Lys His Arg Gln Phe Tyr Pro Ser Cys Ser Phe Val Gln Thr Leu Leu
                85                  90                  95
Ser Ala Ser Leu Gln Ser Pro Ser Lys Asn Met Ser Pro Val Lys Ser
            100                 105                 110
Arg Phe Ala His Ser Ser Pro Leu Glu Arg Gly Gly Ile His Ser Asn
        115                 120                 125
Leu Cys Ser Ser Pro Leu Asn Ser Arg Ala Val Glu Asp Phe Ser Ser
    130                 135                 140
Arg Met Asp Pro Cys Ser Tyr Ala Met Ser Thr Glu Glu Ala Arg Phe
145                 150                 155                 160
Leu Thr Tyr Ser Met Trp Pro Leu Ser Phe Leu Ser Pro Ala Glu Leu
                165                 170                 175
Ala Arg Ala Gly Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys
            180                 185                 190
Phe Ala Cys Gly Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Tyr Ala
        195                 200                 205
Met Ser Glu His Arg Arg His Phe Pro His Cys Pro Phe Leu Glu Asn
    210                 215                 220
Thr Ser Glu Thr Gln Arg Phe Ser Ile Ser Asn Leu Ser Met Gln Thr
225                 230                 235                 240
His Ser Ala Arg Leu Arg Thr Phe Leu Tyr Trp Pro Pro Ser Val Pro
                245                 250                 255
Val Gln Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Asp Arg
            260                 265                 270
Asn Asp Asp Val Lys Cys Leu Cys Cys Asp Gly Gly Leu Arg Cys Trp
        275                 280                 285
Glu Pro Gly Asp Asp Pro Trp Ile Glu His Ala Lys Trp Phe Pro Arg
    290                 295                 300
Cys Glu Phe Leu Ile Arg Met Lys Gly Gln Glu Phe Val Asp Glu Ile
305                 310                 315                 320
Gln Ala Arg Tyr Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp
                325                 330                 335
Thr Pro Gly Glu Glu Asn Ala Asp Pro Thr Glu Thr Val Val His Phe
            340                 345                 350
Gly Pro Gly Glu Ser Ser Lys Asp Val Val Met Met Ser Thr Pro Val
        355                 360                 365
Val Lys Ala Ala Leu Glu Met Gly Phe Ser Arg Ser Leu Val Arg Gln
    370                 375                 380
Thr Val Gln Arg Gln Ile Leu Ala Thr Gly Glu Asn Tyr Arg Thr Val
385                 390                 395                 400
Asn Asp Ile Val Ser Val Leu Leu Asn Ala Glu Asp Glu Arg Arg Glu
                405                 410                 415
Glu Glu Lys Glu Arg Gln Thr Glu Glu Met Ala Ser Gly Asp Leu Ser
            420                 425                 430
Leu Ile Arg Lys Asn Arg Met Ala Leu Phe Gln Gln Leu Thr His Val
        435                 440                 445
Leu Pro Ile Leu Asp Asn Leu Leu Glu Ala Ser Val Ile Thr Lys Gln
    450                 455                 460
Glu His Asp Ile Ile Arg Gln Lys Thr Gln Ile Pro Leu Gln Ala Arg
465                 470                 475                 480
Glu Leu Ile Asp Thr Val Leu Val Lys Gly Asn Ala Ala Ala Asn Ile
                485                 490                 495
Phe Lys Asn Ser Leu Lys Gly Ile Asp Ser Thr Leu Tyr Glu Asn Leu
            500                 505                 510
```

```
Phe Val Glu Lys Asn Met Lys Tyr Ile Pro Thr Glu Asp Val Ser Gly
        515                 520                 525
Leu Ser Leu Glu Glu Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys
    530                 535                 540
Lys Val Cys Met Asp Arg Glu Val Ser Ile Val Phe Ile Pro Cys Gly
545                 550                 555                 560
His Leu Val Val Cys Gln Glu Cys Ala Pro Ser Leu Arg Lys Cys Pro
                565                 570                 575
Ile Cys Arg Gly Thr Ile Lys Gly Thr Val Arg Thr Phe Leu Ser
            580                 585                 590
```

<210> 43
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> based on Homo sapiens

<400> 43
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Met Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
 1               5                  10
```

<210> 44
<211> 635
<212> PRT
<213> Artificial Sequence

<220>
<223> based on Homo sapiens, Mus musculus, Cydia pomonella, and Drosophila melanogaster.

<221> VARIANT
<222> 1,2,3,635
<223> Xaa=any amino acid or may be absent.

<221> VARIANT
<222> (1)...(634)
<223> Xaa=any amino acid.

<400> 44
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1               5                  10                  15
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa Glu Xaa Xaa Arg
            20                  25                  30
Leu Xaa Thr Phe Xaa Xaa Phe Pro Xaa Xaa Xaa Pro Val Ser Xaa Xaa
        35                  40                  45
Xaa Leu Ala Arg Ala Gly Phe Xaa Tyr Thr Gly Xaa Xaa Asp Xaa Val
    50                  55                  60
Xaa Cys Phe Xaa Cys Xaa Xaa Xaa Xaa Asp Xaa Trp Xaa Xaa Gly Asp
65                  70                  75                  80
Ser Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Pro Xaa Cys Xaa Phe Ile
                85                  90                  95
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            100                 105                 110
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa
        115                 120                 125
```

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Xaa Xaa Xaa Xaa Xaa
130 135 140
Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Glu Xaa Xaa Xaa Xaa Xaa Xaa Xaa
145 150 155 160
Xaa Xaa Xaa Xaa Xaa Xaa Asp Xaa Ser Asp Xaa Xaa Xaa Xaa Xaa Xaa
165 170 175
Xaa Xaa Xaa Met Xaa Xaa Glu Glu Ala Arg Leu Xaa Thr Phe Xaa Xaa
180 185 190
Trp Pro Xaa Xaa Xaa Xaa Leu Xaa Pro Xaa Glu Leu Ala Xaa Ala Gly
195 200 205
Phe Tyr Tyr Xaa Gly Xaa Xaa Asp Xaa Val Xaa Cys Phe Xaa Cys Gly
210 215 220
Gly Lys Leu Xaa Asn Trp Glu Pro Xaa Asp Xaa Ala Xaa Ser Glu His
225 230 235 240
Xaa Arg His Phe Pro Xaa Cys Pro Phe Val Xaa Xaa Xaa Xaa Xaa Xaa
245 250 255
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa
260 265 270
Ser Xaa Xaa Xaa Pro Xaa Asn Pro Xaa Met Ala Xaa Xaa Xaa Ala Arg
275 280 285
Xaa Xaa Thr Phe Xaa Xaa Trp Pro Xaa Ser Xaa Xaa Val Xaa Xaa Glu
290 295 300
Gln Leu Ala Xaa Ala Gly Phe Tyr Tyr Xaa Gly Xaa Gly Asp Xaa Val
305 310 315 320
Lys Cys Phe Xaa Cys Xaa Gly Gly Leu Xaa Xaa Trp Xaa Xaa Xaa Asp
325 330 335
Asp Pro Trp Xaa Gln His Ala Lys Trp Phe Pro Xaa Cys Xaa Tyr Leu
340 345 350
Xaa Xaa Xaa Lys Gly Gln Glu Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
355 360 365
Xaa Xaa Leu Xaa Glu Xaa Leu Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa Xaa
370 375 380
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa
385 390 395 400
Xaa Xaa Asp Xaa Val Xaa Xaa Xaa Xaa Pro Xaa Val Xaa Xaa Ala Xaa
405 410 415
Xaa Met Gly Phe Xaa Xaa Xaa Xaa Val Lys Xaa Xaa Xaa Xaa Xaa Lys
420 425 430
Ile Xaa Xaa Xaa Gly Xaa Xaa Tyr Xaa Xaa Xaa Xaa Xaa Leu Val Xaa
435 440 445
Asp Leu Xaa Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Xaa Xaa Xaa
450 455 460
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
465 470 475 480
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
485 490 495
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
500 505 510
Xaa Xaa Xaa Xaa Gln Xaa Xaa Leu Gln Xaa Xaa Xaa Xaa Xaa Xaa Xaa
515 520 525
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
530 535 540
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
545 550 555 560
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Glu Glu
565 570 575
Gln Leu Arg Arg Leu Xaa Glu Glu Xaa Leu Cys Lys Xaa Cys Met Asp
580 585 590
Xaa Glu Val Xaa Xaa Val Phe Xaa Pro Cys Gly His Leu Val Xaa Cys

595 600 605
Xaa Xaa Cys Ala Xaa Ser Val Xaa Lys Cys Pro Met Cys Arg Xaa Xaa
610 615 620
Ile Xaa Xaa Xaa Xaa Xaa Phe Leu Ser Xaa
625 630 635

<210> 45
<211> 204
<212> DNA
<213> Homo sapiens

<400> 45
gagtttaata gattaaaaac ttttgctaat tttccaagtg gtagtcctgt ttcagcatca 60
acactggcac gagcagggtt tctttatact ggtgaaggag ataccgtgcg gtgctttagt 120
tgtcatgcag ctgtagatag atggcaatat ggagactcag cagttggaag acacaggaaa 180
gtatccccaa attgcagatt tatc 204

<210> 46
<211> 204
<212> DNA
<213> Homo sapiens

<400> 46
gaagaagcta gattaaagtc ctttcagaac tggccagact atgctcacct aaccccaaga 60
gagttagcaa gtgctggact ctactacaca ggtattggtg accaagtgca gtgcttttgt 120
tgtggtggaa aactgaaaaa ttgggaacct tgtgatcgtg cctggtcaga acacaggcga 180
cactttccta attgcttctt tgtt 204

<210> 47
<211> 198
<212> DNA
<213> Homo sapiens

<400> 47
tatgaagcac ggatctttac ttttgggaca tggatatact cagttaacaa ggagcagctt 60
gcaagagctg gattttatgc tttaggtgaa ggtgataaag taaagtgctt tcactgtgga 120
ggagggctaa ctgattggaa gcccagtgaa gacccttggg aacaacatgc taaatggtat 180
ccagggtgca aatatctg 198

<210> 48
<211> 138
<212> DNA
<213> Homo sapiens

<400> 48
gagcagctaa ggcgcctgca agaggagaag ctttgcaaaa tctgtatgga tagaaatatt 60
gctatcgttt ttgttccttg tggacatcta gtcacttgta aacaatgtgc tgaagcagtt 120
gacaagtgtc ccatgtgc 138

<210> 49
<211> 204
<212> DNA
<213> Mus musculus

<400> 49
gagtttaata gattaaaaac atttgctaac ttcccaagta gtagtcctgt ttcagcatca 60
acattggcgc gagctgggtt tctttatacc ggtgaaggag acaccgtgca atgtttcagt 120
tgtcatgcgg caatagatag atggcagtat ggagactcag ctgttggaag acacaggaga 180

atatccccaa attgcagatt tatc 204

<210> 50
<211> 204
<212> DNA
<213> Mus musculus

<400> 50
gaagaagcca gattgaagtc atttcagaac tggccggact atgctcattt aacccccaga 60
gagttagcta gtgctggcct ctactacaca ggggctgatg atcaagtgca atgcttttgt 120
tgtgggggaa aactgaaaaa ttgggaaccc tgtgatcgtg cctggtcaga acacaggaga 180
cactttccca attgcttttt tgtt 204

<210> 51
<211> 198
<212> DNA
<213> Mus musculus

<400> 51
tatgaagcac ggatcgttac ttttggaaca tggatatact cagttaacaa ggagcagctt 60
gcaagagctg gattttatgc tttaggtgaa ggcgataaag tgaagtgctt ccactgtgga 120
ggagggctca cggattggaa gccaagtgaa gacccctggg accagcatgc taagtgctac 180
ccagggtgca aataccta 198

<210> 52
<211> 138
<212> DNA
<213> Mus musculus

<400> 52
gagcagctaa ggcgcctaca agaggagaag ctttccaaaa tctgtatgga tagaaatatt 60
gctatcgttt tttttccttg tggacatctg gccacttgta aacagtgtgc agaagcagtt 120
gacaaatgtc ccatgtgc 138

<210> 53
<211> 204
<212> DNA
<213> Homo sapiens

<400> 53
gaactgtacc gaatgtctac gtattccact tttcctgctg gggttcctgt ctcagaaagg 60
agtcttgctc gtgctggttt ctattacact ggtgtgaatg acaaggtcaa atgcttctgt 120
tgtggcctga tgctggataa ctggaaaaga ggagacagtc ctactgaaaa gcataaaaag 180
ttgtatccta gctgcagatt cgtt 204

<210> 54
<211> 201
<212> DNA
<213> Homo sapiens

<400> 54
gaaaatgcca gattacttac ttttcagaca tggccattga cttttctgtc gccaacagat 60
ctggcacgag caggctttta ctacatagga cctggagaca gagtggcttg ctttgcctgt 120
ggtggaaaat tgagcaattg ggaaccgaag gataatgcta tgtcagaaca cctgagacat 180
tttcccaaat gcccatttat a 201

<210> 55
<211> 204
<212> DNA

<213> Homo sapiens

<400> 55
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cagcttgcaa gtgcgggttt ttattatgtg ggtaacagtg atgatgtcaa atgcttttgc 120
tgtgatggtg gactcaggtg ttgggaatct ggagatgatc catgggttca acatgccaag 180
tggtttccaa ggtgtgagta cttg 204

<210> 56
<211> 138
<212> DNA
<213> Homo sapiens

<400> 56
gaacaattgc ggagactacc agaagaaaga acatgtaaag tgtgtatgga caaagaagtg 60
tccatagtgt ttattccttg tggtcatcta gtagtatgca aagattgtgc tccttcttta 120
agaaagtgtc ctatttgt 138

<210> 57
<211> 203
<212> DNA
<213> Mus musculus

<400> 57
agctgtaccg attgtccacg tattcagctt ttcccagggg agttcctgtg tcagaaagga 60
gtctggctcg tgctggcttt tactacactg gtgccaatga caaggtcaag tgcttctgct 120
gtggcctgat gctagacaac tggaaacaag gggacagtcc catggagaag cacagaaagt 180
tgtaccccag ctgcaacttt gta 203

<210> 58
<211> 201
<212> DNA
<213> Mus musculus

<400> 58
gagaaggcca gattactcac ctatgaaaca tggccattgt cttttctgtc accagcaaag 60
ctggccaaag caggcttcta ctacatagga cctggagata gagtggcctg ctttgcgtgc 120
gatgggaaac tgagcaactg ggaacgtaag gatgatgcta tgtcagagca ccagaggcat 180
ttccccagct gtccgttctt a 201

<210> 59
<211> 204
<212> DNA
<213> Mus musculus

<400> 59
cacgcagccc gtattagaac attctctaac tggccttcta gtgcactagt tcattcccag 60
gaacttgcaa gtgcgggctt ttattataca ggacacagtg atgatgtcaa gtgtttatgc 120
tgtgatggtg ggctgaggtg ctgggaatct ggagatgacc cctgggtgga acatgccaag 180
tggtttccaa ggtgtgagta cttg 204

<210> 60
<211> 138
<212> DNA
<213> Mus musculus

<400> 60
gaacagttgc ggcccctccc ggaggacaga atgtgtaaag tgtgtatgga ccgagaggta 60
tccatcgtgt tcattccctg tggccatctg gtcgtgtgca aagactgcgc tccctctctg 120

aggaagtgtc ccatctgt 138

<210> 61
<211> 204
<212> DNA
<213> Homo sapiens

<400> 61
gaactctaca gaatgtctac atattcaact ttccccgccg gggtgcctgt ctcagaaagg 60
agtcttgctc gtgctggttt ttattatact ggtgtgaatg acaaggtcaa atgcttctgt 120
tgtggcctga tgctggataa ctggaaacta ggagacagtc ctattcaaaa gcataaacag 180
ctatatccta gctgtagctt tatt 204

<210> 62
<211> 201
<212> DNA
<213> Homo sapiens

<400> 62
gaagaagcca gatttcttac ctaccatatg tggccattaa ctttttttgtc accatcagaa 60
ttggcaagag ctggttttta ttatatagga cctggagata gggtagcctg ctttgcctgt 120
ggtgggaagc tcagtaactg ggaaccaaag gatgatgcta tgtcagaaca ccggaggcat 180
tttcccaact gtccattttt g 201

<210> 63
<211> 204
<212> DNA
<213> Homo sapiens

<400> 63
catgcagctc gaatgagaac atttatgtac tggccatcta gtgttccagt tcagcctgag 60
cagcttgcaa gtgctggttt ttattatgtg ggtcgcaatg atgatgtcaa atgctttggt 120
tgtgatggtg gcttgaggtg ttgggaatct ggagatgatc catgggtaga acatgccaag 180
tggtttccaa ggtgtgagtt cttg 204

<210> 64
<211> 138
<212> DNA
<213> Mus musculus

<400> 64
gaacaattga ggaggttgca agaagaacga acttgtaaag tgtgtatgga caaagaagtt 60
tctgttgtat ttattccttg tggtcatctg gtagtatgcc aggaatgtgc cccttctcta 120
agaaaatgcc ctatttgc 138

<210> 65
<211> 204
<212> DNA
<213> Mus musculus

<400> 65
gaactctacc gaatgtctac atattcagct tttcccaggg gagttcctgt ctcagagagg 60
agtctggctc gtgctggctt ttattataca ggtgtgaatg acaaagtcaa gtgcttctgc 120
tgtggcctga tgttggataa ctggaaacaa ggggacagtc ctgttgaaaa gcacagacag 180
ttctatccca gctgcagctt tgta 204

<210> 66
<211> 201
<212> DNA

<213> Mus musculus

<400> 66
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ctggccagag ctggcttcta ttacataggg cctggagaca gggtggcctg ttttgcctgt 120
ggtgggaaac tgagcaactg ggaaccaaag gattatgcta tgtcagagca ccgcagacat 180
tttccccact gtccatttct g 201

<210> 67
<211> 204
<212> DNA
<213> Mus musculus

<400> 67
cactctgctc gattgaggac atttctgtac tggccaccta gtgttcctgt tcagcccgag 60
cagcttgcaa gtgctggatt ctattacgtg gatcgcaatg atgatgtcaa gtgcctttgt 120
tgtgatggtg gcttgagatg ttgggaacct ggagatgacc cctggataga acacgccaaa 180
tggtttccaa ggtgtgagtt cttg 204

<210> 68
<211> 114
<212> DNA
<213> Mus musculus

<400> 68
gaacgaactt gcaaagtgtg tatggacaga gaggtttcta ttgtgttcat tccgtgtggt 60
catctagtag tctgccagga atgtgcccct tctctaagga agtgccccat ctgc 114

<210> 69
<211> 68
<212> PRT
<213> Homo sapiens

<400> 69
Glu Phe Asn Arg Leu Lys Thr Phe Ala Asn Phe Pro Ser Gly Ser Pro
1 5 10 15
Val Ser Ala Ser Thr Leu Ala Arg Ala Gly Phe Leu Tyr Thr Gly Glu
20 25 30
Gly Asp Thr Val Arg Cys Phe Ser Cys His Ala Ala Val Asp Arg Trp
35 40 45
Gln Tyr Gly Asp Ser Ala Val Gly Arg His Arg Lys Val Ser Pro Asn
50 55 60
Cys Arg Phe Ile
65

<210> 70
<211> 68
<212> PRT
<213> Homo sapiens

<400> 70
Glu Glu Ala Arg Leu Lys Ser Phe Gln Asn Trp Pro Asp Tyr Ala His
1 5 10 15
Leu Thr Pro Arg Glu Leu Ala Ser Ala Gly Leu Tyr Tyr Thr Gly Ile
20 25 30
Gly Asp Gln Val Gln Cys Phe Cys Cys Gly Gly Lys Leu Lys Asn Trp
35 40 45
Glu Pro Cys Asp Arg Ala Trp Ser Glu His Arg Arg His Phe Pro Asn

50 55 60
Cys Phe Phe Val
65

<210> 71
<211> 66
<212> PRT
<213> Homo sapiens

<400> 71
Tyr Glu Ala Arg Ile Phe Thr Phe Gly Thr Trp Ile Tyr Ser Val Asn
1 5 10 15
Lys Glu Gln Leu Ala Arg Ala Gly Phe Tyr Ala Leu Gly Glu Gly Asp
20 25 30
Lys Val Lys Cys Phe His Cys Gly Gly Gly Leu Thr Asp Trp Lys Pro
35 40 45
Ser Glu Asp Pro Trp Glu Gln His Ala Lys Trp Tyr Pro Gly Cys Lys
50 55 60
Tyr Leu
65

<210> 72
<211> 46
<212> PRT
<213> Homo sapiens

<400> 72
Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys Leu Cys Lys Ile Cys Met
1 5 10 15
Asp Arg Asn Ile Ala Ile Val Phe Val Pro Cys Gly His Leu Val Thr
20 25 30
Cys Lys Gln Cys Ala Glu Ala Val Asp Lys Cys Pro Met Cys
35 40 45

<210> 73
<211> 68
<212> PRT
<213> Mus musculus

<400> 73
Glu Phe Asn Arg Leu Lys Thr Phe Ala Asn Phe Pro Ser Ser Ser Pro
1 5 10 15
Val Ser Ala Ser Thr Leu Ala Arg Ala Gly Phe Leu Tyr Thr Gly Glu
20 25 30
Gly Asp Thr Val Gln Cys Phe Ser Cys His Ala Ala Ile Asp Arg Trp
35 40 45
Gln Tyr Gly Asp Ser Ala Val Gly Arg His Arg Arg Ile Ser Pro Asn
50 55 60
Cys Arg Phe Ile
65

<210> 74
<211> 68
<212> PRT
<213> Mus musculus

<400> 74
Glu Glu Ala Arg Leu Lys Ser Phe Gln Asn Trp Pro Asp Tyr Ala His
1 5 10 15
Leu Thr Pro Arg Glu Leu Ala Ser Ala Gly Leu Tyr Tyr Thr Gly Ala
20 25 30
Asp Asp Gln Val Gln Cys Phe Cys Cys Gly Gly Lys Leu Lys Asn Trp
35 40 45
Glu Pro Cys Asp Arg Ala Trp Ser Glu His Arg Arg His Phe Pro Asn
50 55 60
Cys Phe Phe Val
65

<210> 75
<211> 66
<212> PRT
<213> Mus musculus

<400> 75
Tyr Glu Ala Arg Ile Val Thr Phe Gly Thr Trp Ile Tyr Ser Val Asn
1 5 10 15
Lys Glu Gln Leu Ala Arg Ala Gly Phe Tyr Ala Leu Gly Glu Gly Asp
20 25 30
Lys Val Lys Cys Phe His Cys Gly Gly Gly Leu Thr Asp Trp Lys Pro
35 40 45
Ser Glu Asp Pro Trp Asp Gln His Ala Lys Cys Tyr Pro Gly Cys Lys
50 55 60
Tyr Leu
65

<210> 76
<211> 46
<212> PRT
<213> Mus musculus

<400> 76
Glu Gln Leu Arg Arg Leu Gln Glu Glu Lys Leu Ser Lys Ile Cys Met
1 5 10 15
Asp Arg Asn Ile Ala Ile Val Phe Phe Pro Cys Gly His Leu Ala Thr
20 25 30
Cys Lys Gln Cys Ala Glu Ala Val Asp Lys Cys Pro Met Cys
35 40 45

<210> 77
<211> 68
<212> PRT
<213> Homo sapiens

<400> 77
Glu Leu Tyr Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro
1 5 10 15
Val Ser Glu Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val
20 25 30
Asn Asp Lys Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp
35 40 45
Lys Arg Gly Asp Ser Pro Thr Glu Lys His Lys Lys Leu Tyr Pro Ser
50 55 60

Cys Arg Phe Val
65

<210> 78
<211> 67
<212> PRT
<213> Homo sapiens

<400> 78
Glu Asn Ala Arg Leu Leu Thr Phe Gln Thr Trp Pro Leu Thr Phe Leu
 1   5   10   15
Ser Pro Thr Asp Leu Ala Arg Ala Gly Phe Tyr Tyr Ile Gly Pro Gly
            20   25   30
Asp Arg Val Ala Cys Phe Ala Cys Gly Gly Lys Leu Ser Asn Trp Glu
        35   40   45
Pro Lys Asp Asn Ala Met Ser Glu His Leu Arg His Phe Pro Lys Cys
    50   55   60
Pro Phe Ile
65

<210> 79
<211> 68
<212> PRT
<213> Homo sapiens

<400> 79
His Ala Ala Arg Phe Lys Thr Phe Phe Asn Trp Pro Ser Ser Val Leu
 1   5   10   15
Val Asn Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Asn
            20   25   30
Ser Asp Asp Val Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp
        35   40   45
Glu Ser Gly Asp Asp Pro Trp Val Gln His Ala Lys Trp Phe Pro Arg
    50   55   60
Cys Glu Tyr Leu
65

<210> 80
<211> 46
<212> PRT
<213> Homo sapiens

<400> 80
Glu Gln Leu Arg Arg Leu Pro Glu Glu Arg Thr Cys Lys Val Cys Met
 1   5   10   15
Asp Lys Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val Val
            20   25   30
Cys Lys Asp Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys
        35   40   45

<210> 81
<211> 68
<212> PRT
<213> Mus musculus

<400> 81
Glu Leu Tyr Arg Leu Ser Thr Tyr Ser Ala Phe Pro Arg Gly Val Pro
1 5 10 15
Val Ser Glu Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Ala
20 25 30
Asn Asp Lys Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp
35 40 45
Lys Gln Gly Asp Ser Pro Met Glu Lys His Arg Lys Leu Tyr Pro Ser
50 55 60
Cys Asn Phe Val
65

<210> 82
<211> 67
<212> PRT
<213> Mus musculus

<400> 82
Glu Lys Ala Arg Leu Leu Thr Tyr Glu Thr Trp Pro Leu Ser Phe Leu
1 5 10 15
Ser Pro Ala Lys Leu Ala Lys Ala Gly Phe Tyr Tyr Ile Gly Pro Gly
20 25 30
Asp Arg Val Ala Cys Phe Ala Cys Asp Gly Lys Leu Ser Asn Trp Glu
35 40 45
Arg Lys Asp Asp Ala Met Ser Glu His Gln Arg His Phe Pro Ser Cys
50 55 60
Pro Phe Leu
65

<210> 83
<211> 68
<212> PRT
<213> Mus musculus

<400> 83
His Ala Ala Arg Ile Arg Thr Phe Ser Asn Trp Pro Ser Ser Ala Leu
1 5 10 15
Val His Ser Gln Glu Leu Ala Ser Ala Gly Phe Tyr Tyr Thr Gly His
20 25 30
Ser Asp Asp Val Lys Cys Leu Cys Cys Asp Gly Gly Leu Arg Cys Trp
35 40 45
Glu Ser Gly Asp Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg
50 55 60
Cys Glu Tyr Leu
65

<210> 84
<211> 46
<212> PRT
<213> Mus musculus

<400> 84
Glu Gln Leu Arg Pro Leu Pro Glu Asp Arg Met Cys Lys Val Cys Met
1 5 10 15
Asp Arg Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val Val
20 25 30

Cys Lys Asp Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys
35 40 45

<210> 85
<211> 68
<212> PRT
<213> Homo sapiens

<400> 85
Glu Leu Tyr Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro
1 5 10 15
Val Ser Glu Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val
20 25 30
Asn Asp Lys Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp
35 40 45
Lys Leu Gly Asp Ser Pro Ile Gln Lys His Lys Gln Leu Tyr Pro Ser
50 55 60
Cys Ser Phe Ile
65

<210> 86
<211> 67
<212> PRT
<213> Homo sapiens

<400> 86
Glu Glu Ala Arg Phe Leu Thr Tyr His Met Trp Pro Leu Thr Phe Leu
1 5 10 15
Ser Pro Ser Glu Leu Ala Arg Ala Gly Phe Tyr Tyr Ile Gly Pro Gly
20 25 30
Asp Arg Val Ala Cys Phe Ala Cys Gly Gly Lys Leu Ser Asn Trp Glu
35 40 45
Pro Lys Asp Asp Ala Met Ser Glu His Arg Arg His Phe Pro Asn Cys
50 55 60
Pro Phe Leu
65

<210> 87
<211> 68
<212> PRT
<213> Homo sapiens

<400> 87
His Ala Ala Arg Met Arg Thr Phe Met Tyr Trp Pro Ser Ser Val Pro
1 5 10 15
Val Gln Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Arg
20 25 30
Asn Asp Asp Val Lys Cys Phe Gly Cys Asp Gly Gly Leu Arg Cys Trp
35 40 45
Glu Ser Gly Asp Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg
50 55 60
Cys Glu Phe Leu
65

<210> 88

<211> 46
<212> PRT
<213> Homo sapiens

<400> 88
Glu Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Met
 1   5   10   15
Asp Lys Glu Val Ser Val Val Phe Ile Pro Cys Gly His Leu Val Val
            20   25   30
Cys Gln Glu Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys
        35   40   45

<210> 89
<211> 68
<212> PRT
<213> Mus musculus

<400> 89
Glu Leu Tyr Arg Met Ser Thr Tyr Ser Ala Phe Pro Arg Gly Val Pro
 1   5   10   15
Val Ser Glu Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val
            20   25   30
Asn Asp Lys Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp
        35   40   45
Lys Gln Gly Asp Ser Pro Val Glu Lys His Arg Gln Phe Tyr Pro Ser
    50   55   60
Cys Ser Phe Val
65

<210> 90
<211> 67
<212> PRT
<213> Mus musculus

<400> 90
Glu Glu Ala Arg Phe Leu Thr Tyr Ser Met Trp Pro Leu Ser Phe Leu
 1   5   10   15
Ser Pro Ala Glu Leu Ala Arg Ala Gly Phe Tyr Tyr Ile Gly Pro Gly
            20   25   30
Asp Arg Val Ala Cys Phe Ala Cys Gly Gly Lys Leu Ser Asn Trp Glu
        35   40   45
Pro Lys Asp Tyr Ala Met Ser Glu His Arg Arg His Phe Pro His Cys
    50   55   60
Pro Phe Leu
65

<210> 91
<211> 68
<212> PRT
<213> Mus musculus

<400> 91
His Ser Ala Arg Leu Arg Thr Phe Leu Tyr Trp Pro Pro Ser Val Pro
 1   5   10   15
Val Gln Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Asp Arg
            20   25   30


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Asn Asp Asp Val Lys Cys Leu Cys Cys Asp Gly Gly Leu Arg Cys Trp
          35                  40                  45
Glu Pro Gly Asp Asp Pro Trp Ile Glu His Ala Lys Trp Phe Pro Arg
      50                  55                  60
Cys Glu Phe Leu
65
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<210> 92
<211> 38
<212> PRT
<213> Mus musculus

<400> 92

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Glu Arg Thr Cys Lys Val Cys Met Asp Arg Glu Val Ser Ile Val Phe
 1               5                  10                  15
Ile Pro Cys Gly His Leu Val Val Cys Gln Glu Cys Ala Pro Ser Leu
            20                  25                  30
Arg Lys Cys Pro Ile Cys
        35
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